

### REMARKS

Claims 1-2, and 5-13 remain pending in this application. Favorable reconsideration is respectfully requested in light of the remarks submitted herein.

The Examiner objected to the drawings. Applicant submits herewith a proposed drawing correction indicating the proper cross-hatching to indicate the insulation and conductor materials. Favorable reconsideration is respectfully requested in light of the proposed drawing correction.

Claims 1-2 and 5-13 are rejected under 35 U.S.C. § 103(a) as being obvious over Applicant's Own Admission of Prior Art (AOAPA) in view of Dammert et al. (WO 95/17463). Applicant respectfully traverses this rejection. Applicant traverses the Examiner's assertion that an admission of "prior art" has been made. No such admission was made. Rather, the section referred to by the Examiner is titled "Technical Background" and not "Prior Art".

To make out a *prima facie* case of obviousness under 35 U.S.C. § 103(a), (1) there must be some suggestion or motivation to combine the references or modify the reference teaching, (2) there must be a reasonable expectation of success, and (3) the reference or references when combined must teach or suggest each claim limitation. For such a rejection, the examiner should set forth the following in the Office Action:

- (1) the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line number(s) where appropriate,
- (2) the difference or differences in the claim over the applied reference(s),
- (3) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter, and
- (4) an explanation why one of ordinary skill in the art at the time the invention was made would have been motivated to make the modification.

M.P.E.P. § 706.02(j) (2003). Applicant submits that a *prima facie* case of obviousness cannot be made because none of the three required criteria are met. A *prima facie* case of obviousness cannot be made because the AOAPA, Dammert, or the combination thereto do not teach all of the claim elements, there is no reasonable expectation of success, and there is no suggestion or motivation to combine the references or modify the reference teaching.

The Applicant respectfully traverses the Examiner's characterization of the AOAPA. The Examiner asserts that according to the AOAPA, Applicant has disclosed that cables include an insulating layer comprising "a hydrolysable silane group and a silanol condensation catalyst."

Applicant respectfully disagrees with the Examiner's reading of the AOAPA reference with respect to this point. The passage mentioned does not relate to cables, but to the cross-linking of ethylene polymers in general. Examiner asserts that according to the AOAPA, Applicant has disclosed that cables include "an insulating layer comprising a cross linkable polymer (ethylene polymer) with a hydrolysable silane groups (DBTDL) and an outer semiconducting layer to form the cable." Again, Applicant respectfully disagrees with the Examiner's assertion. The passage mentioned does not refer to cable. The Examiner asserts that this is "in the presence of superatmospheric steam." Again, Applicant respectfully disagrees with the Examiner's assertion. The passage in AOAPA does not disclose superatmospheric steam. The Examiner asserts that "AOAPA discloses that crosslinking is commonly done in a vulcanizing tube." Applicant respectfully disagrees with the Examiner's assertion. The passage mentioned refers to peroxide cross-linking and not to the cross-linking of silane cross-linkable polymers. The Examiner asserts that "AOAPA discloses that the cross linking is capable of being carried out at a pressure of 0.2-2.5 MPa or 0.8-1.2 MPa (i.e. extrusion pressures)." Applicant respectfully disagrees with the Examiner's assertion. There is no such reference to any passage in the specification and Applicant has not admitted that this is known.

Further, the Dammert reference does not disclose the Applicant's invention or remedy the flaws in the AOATA. Dammert does not disclose power cables, the use of the composition for power cables, or the preparation of a power cable in accordance with the present invention. Dammert does not disclose that the hydrophilic nature of the insulating layer facilitates cross-linking of the insulating layer with the defined silanol condensation catalyst. Dammert does not disclose that, contrary to conventional and accepted knowledge, which is cross-linking at atmospheric pressure, the present invention allows cross-linking at superatmospheric pressure, i.e. more rapid and effective cross-linking. Dammert does not disclose that the cross-linking can be carried out in a vulcanizing tube (which normally already exists for carrying out peroxide cross-linking).

Dammert does disclose the specific silanol condensation catalyst used in the present invention, but only as such and its general use for the cross-linking of cross-linkable polymer compositions with hydrolysable silane groups. Dammert does not disclose electric power cables, insulating layers of such cables, that such insulating layers may comprise a silane cross-linkable polymer, or that the catalyst according to Dammert may be used for the cross-linking of such

insulating layers. Rather, in view of the difficulties involved in connection with a possible use of a silane cross-linkable polymer for the insulating layer of an electric power cable, and in view of many important and surprising advantages achieved according to the present invention (as mentioned above and in the present application) must be considered as inventive to apply the catalyst according to Dammert for the cross-linking of the specific silane cross-linkable insulating layer of the electric power cable of the present invention. Thus, the power cable and the process of preparing such a power cable in accordance with the present invention are not obvious in view of Dammert.

There is additional proof that the invention is not obvious because there was no reasonable expectation of success at the time of invention. The invention allows cross-linking (of hydrolysable silane groups) of thick (>5 mm) insulating layers of power cables. Such moisture curing of thick insulating layers "hidden" between the semiconducting layers of the power cable has not been considered feasible before. The invention also provides surprisingly good results in water treeing characteristics.

Further, one of skill in the art would not "immediately envisage" the compositions in Applicant's invention from the disclosure of Dammert. This is evidenced by the facts that (1) the list of the third component of the copolymer is only mentioned as a possibility, it is not a preferred embodiment, (2) there is no indication of the advantageous properties that any of the third comonomer can impart to the composition, and (3) none of the examples incorporate a member of the third component list. Although Dammert does disclose a composition that includes a polymer with a copolymer that has hydrophilic groups, it does not exemplify it. Although Dammert does disclose that a silanol condensation catalyst can be used, the condensation catalyst (whether it contains a carboxylic acid or not) is not incorporated into the polymer, it merely initiates the polymerization. Only one polymer composition is actually looked at—ethylene and vinyl trimethoxysilane—and no hydrophilic groups are in the polymer. Also, there is no indication in Dammert regarding the characteristics of the composition that the present invention was meant to address. Therefore, one of skill in the art would not have been motivated to select for these characteristics.

Therefore, neither AOAPA, Dammert, nor the combination thereof discloses or suggests the Applicant's invention. Applicant respectfully asserts that the AOAPA, Dammert, or the combination thereof fail to teach or suggest all of the elements of the pending claims.

Furthermore, a *prima facie* case of obviousness has not been made because there is no suggestion or motivation to modify the teachings of the prior art to result in Applicant's invention. Specifically, the prior art provided no motivation to modify the insulating layer of AOAPA to comprise the polymeric component configuration in Dammert. The only motivation for this modification can be found in the Applicant's specification, because the Applicant realized that there was a problem with the cables of Dammert because the rate of migration of water was not high enough. It is improper, in determining whether a person of ordinary skill in the art would have been motivated to make the modification based on what the Applicant teaches in the specification. MPEP 2143.01. Because there was no motivation to modify the teachings of the prior art to result in Applicant's invention, a *prima facie* case of obviousness cannot be made, and therefore, rejection of the newly amended claims as obvious is not proper. Applicant respectfully requests that the rejection under 35 U.S.C. § 103 be withdrawn.

In order to establish *prima facie* obviousness, three basic criteria must be met, namely: (1) there must be some suggestion or motivation to combine the references or modify the reference teaching; (2) there must be a reasonable expectation of success; and (3) the reference or references when combined must teach or suggest each claim limitation. Applicant submits that a *prima facie* case of obviousness cannot be made because none of the three required criteria are met. Applicant respectfully requests that the rejection under 35 U.S.C. § 103 be withdrawn.


#### Conclusion

In view of the above remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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Date: March 12, 2004

  
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